



100

PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCCGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA
 101 GAGAAGGTGGCGGGGTAACGGAAAGTGTGCTGTACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

Psp1406I (203)
HindIII (245) **Bsu36I (291)**

201 GTGAACGTTCTTTTTCGCAACGGGTTTGGCCGAGAACACAGCTGAAGCTTCGAGGGGCTCGCATCTCTCTTACCGCGCCCGCCGCTACCTGAGGCC
 301 GCCATCCACGCGGTTGAGTGCCTTCTGCCGCTCCCGCCTGTGGTGCCTCCTGAACTGCGTCCGCCGTCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)
NgoMI (441)
NaeI (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCAACTCTACGTCTTTGTTTCGTTT

BspHI (560)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGCGCCTACCTGAGATCACCGGTCATCATGAAGTCTGCGGCCTTTTACCTTTACGGTGCTCCT
 1►Me tLysSer CysG l yLeuLeuP roPheThr Va l LeuLe

BamHI (608)
HindIII (697)

601 TGCTCTGGGGATCCTGGCACCTGGACTGTGGAAGGAGCAAAAATGATGCTATCAAAAATCGGAGCCTGCCCTGCTAAAAAGCCTGCCAGTGCCTTAAG
 13►uAl aLeuG l y l eLeuAl aP roT rPThr Va l Gl uG l yG l yLysAsnAspAl al l eLys l l eG l yAl aCysP roAl aLysLysP roAl aG l nCysLeuLys

XmaI (735)
SmaI (735)

701 CTTGAGAAGCCACAATGCCGTAAGTGGAGTGGCCGGAAAGCAGAGGTGCTGCCAAGATGCTTGGGTTCCAAGTGCCTGAATCCTGTTCCCATTC
 47►LeuG l uLysP roG l nCysArgThr AspT rPGl uCysP roG l yLysG l nArgCysCysG l nAspAl aCysG l ySer LysCysVa l AsnP roVa l P ro l l eA
 801 GCAAACAGTGTGGAGGAAGCCTGGGAGGTGCGTCAAACTCAGGCAAGATGTATGATGCTTAAACCTCCCAATGTCTGCCAGAGGACGGGCGAGTGTGA
 80►r gLysP roVa l T rPArgLysP roG l yA r gCysVa l LysThr Gl nAl aArgCysMe tMe tLeuAsnP roP roAsnVa l CysG l nArgAspG l yG l nCysAs

MscI (980)
BalI (980)

901 CGGCAATACAAGTGTGTGAGGTATATGTGGAAAGTCTGCCTGCCCCGATGTGAGCCTGATCCCTGACATGCTAGCTGGCCAGACATGATAAGATA
 113►pG l yLysTyrLysCysCysG l uG l y l eCysG l yLysVa l CysLeuP roP roMe t•••

1001 CATTGATGAGTTTGACAAACCACTAGAATGCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGC

HpaI (1112) **MfeI (1123)**

1101 TGCAATAACAAGTTAACAAACAATTGCATTCAATTTATGTTTCAGGTTCCAGGGGAGGTGTGGGAGGTTTTTAAAGCAAGTAAACCTCTACAAT

EcoRI (1208)

1201 GTGGTATGGAATTTAAATACAGCATAGCAAACTTTAACTCCAATCAAGCCTCTACTTGAATCCTTTTCTGAGGGATGAATAAGGCATAGGCATCA
 1301 GGGGCTGTTGCCAATGTGCATTAGCTGTTTGCAGCCTCACCTTCTTCATGGAGTTAAGATATAGTGTATTTTCCAAGGTTTGAAGTACTCTTCATT

SspI (1447) **SwaI (1461)**

1401 TCTTTATGTTTTAAATGCACTGACCTCCACATTCCTTTTTAGTAAAATATTCAGAAATAATTTAAATACATCATTGCAATGAAAATAAATGTTTTTTA

EcoO109I (1522)

1501 TTAGGCAGAAATCCAGATGCTCAAGGCCCTTCATAATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATTTGGACAGCAAG
 1601 AAAGCGAGCTTCTAGCTTTAGTTCCTGGTACTTGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGTTGCCATTCTCTCAATGAGCACAAAGC
 141►•••AsnArgThr TyrLysLeuP ro l l eLeuG l uG l u l l eThr Thr LysVa l LeuLysG l yAsnMe tG l u l l eLeuVa l PheCy

SacI (1722) **BstXI (1751)**

1701 AGTCAGGAGCATAGTCAGAGATGAGCTCTGCACATGCCACAGGGGCTGACCACCCTGATGGATCTGTCCACCCTCATCAGAGTAGGGGTGCCTGACAGC
 113►sAsP roAl aTyrAspSer l l eLeuG l uArgCysMe tG l yCysP roSer Va l Va l Arg l l eSer ArgAspVa l G l uAspSer TyrP roHi sArgVa l Al a

StuI (1886)
Eco147I (1886)

1801 CACAATGGTGTCAAAGTCTTCTGCCGTTGCTCACAGCAGACCAATGGCAATGGCTTCAGCACAGACAGTACCCTGCCAATGTAGGCCTCAATGTGG
 80►Val l l eThr AspPheAspLysG l nG l yAsnSer Va l Al aSer G l y l l eAl a l l eAl aG l uAl aCysVa l Thr Va l ArgG l y l l eTyrAl aG l u l l eHi sV
 1901 ACAGCAGAGATGATCTCCAGCTTGGTCTGATGGCCGCCGACATGGTGTCTGTGTCTCATAGAGCATGGTGTCTTCTCAGTGGCGACCTCCA
 46►aAl aSer l l e l l eG l uG l yThr LysThr Arg l l eAl aAl aG l yAl aHi sHi sLysAsnAspG l uTyrLeuMe tThr l l eLysG l uThrAl aVa l G l uVa

BspHI (2036) **VspI (2094)**
XmnI (2028) **AseI (2094)**

2001 CCAGCTCCAGATCCTGCTGAGAGATGTTGAAGGCTTCATGATGGCCCTCTATAGTGTGATTATACTATGCGATATACTATGCCGATGATTAAT
 13► l l eLeuG l uLeuAspG l nG l nSer l l eAsnPheThr LysMe t

SacI (2151)

2101 TGTCAAACACGCGTGATGGCGTCTCCAGC T TATCTGACGGTTCACATAACGAGCTCTGCTTATATAGACCTCCACCGTACACGCTACCGCCATTG

SpeI (2249)

2201 CGTCAATGGGGCGGAGTTGTTACGACATTTTGGAAAGTCCCGTTGATTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGGAGACTTGAAA

SnaBI (2377)
Eco105I (2377)

2300 TCCCCGTGAGTCAAACCGCTATCCACGCCATTGATGTAAGTCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTAAGTCCAAAGTA

NdeI (2482)

2400 GGAAAGTCCATAAGGTCATGTA CTGGGCATAATGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACTTGTAT
2500 GTACTGCCAAGTGGGCGAGTTTACCGTAAATACTCCACCCATTGACGTCAATGGAAAGTCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGT

PstI (2661)

SdaI (2660) PacI (2668)

BspLU11I (2678)

2600 CAATGGGCGGGGTCGTTGGGCGGT CAGCCAGGCGGGCCATTTACCGTAAGTTATGTAACGCTGCAGGTTAA TTAAGAACATGTGAGCAAAAGGCCA
2698 GCAAAAGGCCAGGAACCGTAAAAAGGCCGCTTGTGCGGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAATCGACGCTCAAGTCAGAGG
2798 TGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCCCTGGAAGTCCCTCGTGGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGT

ApaLI (2992)

2898 CCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTCCGCTCCAAGCTGGGCTGTGTGCA
2998 CGAACCCCGTT CAGCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACT
3098 GGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCT
3198 GCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGTGTTGCAAGCA
3298 GCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGGAAACGAAAACCTCACGTTAAGGGATTTTG

EagI (3428)

PacI (3408) SmaI (3417)

NotI (3427)

3398 GTCATGGCTAGTTAATTAACATTTAAATC AGCGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAATCGTAACTAAC
3498 ATACGCTCTCCATCAAAACAAAACGAAACAAAACAAACTAGCAAATAGGCTGTCCCGAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA